

Title (en)  
METHOD FOR PREDICTING THERAPEUTIC EFFICACY OF PI3K/AKT/mTOR INHIBITOR ON BASIS OF PHLDA1 OR PIK3C2B EXPRESSION

Title (de)  
VERFAHREN ZUR VORHERSAGE DER THERAPEUTISCHEN WIRKUNG EINES PI3K/AKT-/MTOR-HEMMERS AUF GRUNDLAGE EINER PHLDA1- ODER PIK3C2BB-EXPRESSION

Title (fr)  
MÉTHODE DE PRÉDICTION DE L'EFFICACITÉ THÉRAPEUTIQUE D'UN INHIBITEUR DE PI3K/AKT/mTOR D'APRÈS L'EXPRESSION DE PHLDA1 OU PIK3C2B

Publication  
**EP 3012327 A4 20170322 (EN)**

Application  
**EP 14813575 A 20140619**

Priority  
• JP 2013129591 A 20130620  
• JP 2014066255 W 20140619

Abstract (en)  
[origin: EP3012327A1] An object of the present invention is to provide a chemotherapy using a PI3K/AKT/mTOR inhibitor that produces an excellent antitumor effect on a cancer patient. The present invention provides a method for predicting the therapeutic efficacy of the chemotherapy using the antitumor agent comprising a PI3K/AKT/mTOR inhibitor on a cancer patient on the basis of the expression level of PHLDA1 and/or PIK3C2B in a biological sample containing tumor cells isolated from the cancer patient.

IPC 8 full level  
**A61K 31/366** (2006.01); **A61K 31/4155** (2006.01); **A61K 31/436** (2006.01); **A61K 31/4375** (2006.01); **A61K 31/4745** (2006.01); **A61K 31/519** (2006.01); **A61K 31/52** (2006.01); **A61K 31/5365** (2006.01); **A61K 31/5377** (2006.01); **A61K 31/7064** (2006.01); **A61K 45/00** (2006.01); **A61P 35/00** (2006.01); **C12N 15/09** (2006.01); **C12Q 1/68** (2006.01); **G01N 33/574** (2006.01); **G01N 33/68** (2006.01)

CPC (source: EP KR RU US)  
**A61K 31/366** (2013.01 - EP KR RU US); **A61K 31/4155** (2013.01 - EP KR RU US); **A61K 31/436** (2013.01 - EP RU US); **A61K 31/4375** (2013.01 - EP RU US); **A61K 31/4745** (2013.01 - EP RU US); **A61K 31/519** (2013.01 - EP RU US); **A61K 31/52** (2013.01 - EP RU US); **A61K 31/5365** (2013.01 - EP KR RU US); **A61K 31/5377** (2013.01 - EP KR RU US); **A61K 31/7064** (2013.01 - EP KR RU US); **A61P 35/00** (2017.12 - EP); **C12N 15/09** (2013.01 - KR); **C12Q 1/6886** (2013.01 - EP KR RU US); **G01N 33/57484** (2013.01 - EP KR RU US); **G01N 33/57496** (2013.01 - RU US); **C12Q 2600/106** (2013.01 - US); **C12Q 2600/118** (2013.01 - EP KR US); **C12Q 2600/158** (2013.01 - EP KR US); **G01N 2333/4703** (2013.01 - US); **G01N 2333/91215** (2013.01 - US); **G01N 2800/52** (2013.01 - EP KR US)

Citation (search report)  
• [XY] WO 2010087497 A1 20100805 - JAPAN HEALTH SCIENCE FOUND [JP], et al  
• [YD] WO 2012137870 A1 20121011 - TAIHO PHARMACEUTICAL CO LTD [JP], et al  
• [X] DANIELLE BOLLER: "Targeting PI3KC2[beta] Impairs Proliferation and Survival in Acute Leukemia, Brain Tumours and Neuroendocrine Tumours", ANTICANCER RESEARCH, 1 January 2012 (2012-01-01), pages 3015 - 3028, XP055329232, Retrieved from the Internet <URL:http://ar.iiajournals.org/content/32/8/3015.full.pdf> [retrieved on 20161214]  
• [XY] Z LIU ET AL: "Phosphatidylinositol 3-kinase-C2[beta] inhibits cisplatin-mediated apoptosis via the Akt pathway in oesophageal squamous cell carcinoma", THE JOURNAL OF INTERNATIONAL MEDICAL RESEARCH, 1 January 2011 (2011-01-01), England, pages 1319 - 1332, XP055301016, Retrieved from the Internet <URL:http://imr.sagepub.com/content/39/4/1319.full.pdf>  
• [Y] KNOBBE C B ET AL: "Genetic alterations and aberrant expression of genes related to the phosphatidyl-inositol-3'-kinase/protein kinase B (Akt) signal transduction pathway in glioblastomas", BRAIN PATHOLOGY, ZUERICH, CH, vol. 13, no. 4, 1 October 2003 (2003-10-01), pages 507 - 518, XP002690127, ISSN: 1015-6305  
• [Y] S. DAN ET AL: "Correlating Phosphatidylinositol 3-Kinase Inhibitor Efficacy with Signaling Pathway Status: In silico and Biological Evaluations", CANCER RESEARCH, vol. 70, no. 12, 15 June 2010 (2010-06-15), US, pages 4982 - 4994, XP055329174, ISSN: 0008-5472, DOI: 10.1158/0008-5472.CAN-09-4172  
• [Y] PIXU LIU ET AL: "Targeting the phosphoinositide 3-kinase pathway in cancer", NATURE REVIEWS DRUG DISCOVERY, vol. 8, no. 8, 1 August 2009 (2009-08-01), pages 627 - 644, XP055020926, ISSN: 1474-1776, DOI: 10.1038/nrd2926  
• [Y] SADEGHI N ET AL: "Targeting the PI3K pathway for cancer therapy", FUTURE MEDICINAL CHEMISTRY, FUTURE SCIENCE LTD, GB, vol. 4, no. 9, 1 June 2012 (2012-06-01), pages 1153 - 1169, XP008166436, ISSN: 1756-8919, DOI: 10.4155/FMC.12.56  
• See references of WO 2014203959A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 3012327 A1 20160427; EP 3012327 A4 20170322; EP 3012327 B1 20201216**; AU 2014282179 A1 20160128; AU 2014282179 B2 20170914; DK 3012327 T3 20210125; DK 3543355 T3 20210301; EP 3543355 A1 20190925; EP 3543355 B1 20201223; ES 2844200 T3 20210721; ES 2855698 T3 20210924; HU E053322 T2 20210628; HU E053611 T2 20210728; JP 6289459 B2 20180307; JP WO2014203959 A1 20170223; KR 102279579 B1 20210721; KR 20160021836 A 20160226; KR 20180069141 A 20180622; PL 3012327 T3 20210419; PL 3543355 T3 20210531; PT 3012327 T 20210122; PT 3543355 T 20210219; RU 2016101364 A 20170726; RU 2666921 C2 20180913; TW 201537174 A 20151001; TW 201819923 A 20180601; TW I626443 B 20180611; US 10155990 B2 20181218; US 2016102366 A1 20160414; WO 2014203959 A1 20141224

DOCDB simple family (application)  
**EP 14813575 A 20140619**; AU 2014282179 A 20140619; DK 14813575 T 20140619; DK 19172747 T 20140619; EP 19172747 A 20140619; ES 14813575 T 20140619; ES 19172747 T 20140619; HU E14813575 A 20140619; HU E19172747 A 20140619; JP 2014066255 W 20140619; JP 2015522970 A 20140619; KR 20167001179 A 20140619; KR 20187017138 A 20140619; PL 14813575 T 20140619; PL 19172747 T 20140619; PT 14813575 T 20140619; PT 19172747 T 20140619; RU 2016101364 A 20140619; TW 103121201 A 20140619; TW 106134940 A 20140619; US 201414895286 A 20140619